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Case Study

THE AYURVEDIC MANAGEMENT IN GRAYING OF HAIR

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Palithya, Graying of hair, *Guluchyathi kashayam, Usheerasavam* and *Chandraprabha vati, Mahathikthaka ghrta, Siropichu, Prapoundarikadi taila, Agasthya rasayana.*

ABSTRACT

Premature graying may be due to early depletion of melanocyte reservoir seeding potential owing to environmental factors, inflammation or psychological stress. Reactive oxygen species-mediated damage to mitochondrial and nuclear DNA with mutations with age and dysregulation of anti-oxidant mechanisms or pro/anti-apoptotic factors within the cells results in melanocytic aging. Ayurveda addresses canities as *Palithya*. *Bhrajaka pitha* is responsible for imparting natural colour to hair. Ayurveda classics mention it as *Sirogatavyadhi* (Caraka Samhita), *Sirokapalagatavyadhi* (Vagbhata) or *Khudraroga* (Sushruta Samhita). Case presentation: The patient was of age 28 years, female, unmarried moderately built with BMI 21.8, with history of PCOD and migraine. She had presented with greying of hair over vertex region of head. She was of *Kaphapitha prakrthi* with dietary habits including fast food, spicy food, pickles and mixed diet. She had stress due to work and due to going to work by scooter, she is prone to sunlight exposure and had a habit of helmet wearing. She was given internal medication of *Guluchyathi kashayam, Usheerasavam* and *Chandraprabha vati*. Then, she was given *Vicharana snehapana* with *Mahathikthaka ghrta* and done *Shodhana* with *Avipathi choornam*. Then the *Bahya prayoga* of *Siropichu* was done with *Prapoundarikadi taila* and *Rasayana* done with *Agasthya rasayana*. **Conclusion**: *Guluchyathi kashayam, Usheerasavm* and *Chandraprabha* caused balance of *Agni* in the body, they were *Pithasamaka* also. *Mahatikthaka snehapana* reduced dryness and brought *Snighdada* to the body. The accumulated imbalanced *Pitha* was eliminated from the body through *Virechana* by *Avipathy choornam*. After *Shodana*, external application as *Siropichu* with *Prapoundarikadi taila* which was *Palithyahara, Pithahara* and *Keshya* was done. *Rasayana* was given with *Agasthya rasayana*. The new hair growth was of black, there was an increase in hair growth and satisfactory reduction in hair fall. There was stress relief and overall coolness of body.

INTRODUCTION

Hair colour and style are factors which affect self-perception and confidence in a majority of people in the arena of beauty. The people affected by premature graying or canities are affected by social stigma and difficulties in partnership. Study says 6-23% of people have 50% gray hair by 50 years of age known as the 50-50-50 rule[1]. Both sexes are equally affected. Most non-pigmented hairs are white, attributable to total loss of melanin in the hair bulb.

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'Gray hair' implies a mixture of white non-pigmented hairs and pigmented hairs.

Definition

Canities, achromotrichia or hair graying is a process of chronological aging and occurs regardless of gender or race. Hair is said to gray prematurely only if graying occurs before the age of 20 years in White, before 25 years in Asians and before 30 years in Africans.[2]

Etiopathogenesis

The colour of hair depends upon melanogenesis. Hair follicles contain eumelanins (black-brown pigment) and pheomelanins (yellow or red pigment). These pigments combine in various proportions to create vast spectrum of natural hair colours observed in humans. Senile canities are due to

the weathering away of the regenerative capacity of hair pigmentation. Active hair growth makes genotoxic or oxidative stress in hair bulge. This internal stress may cause depletion of bulge melanocytic stem cells (undifferentiated cells that can regenerate hair colour) in the hair follicles eventually, which can lead to hair graying with age.

Premature graying may be due to early depletion of melanocyte reservoir seeding potential owing to environmental factors, inflammation or psychological stress. It can occur along with autosomal dominant disorders, autoimmune disorders such as pernicious anemia, hyper or hypothyroidism and aging syndromes like progeria and pangeria, and also atopic diathesis. Nutritional insufficiency (protein loss, copper deficiency) causes graying of hair which is reversible. Graying of hair occurs as the side effects of drugs like chlroquine, dixyrazine etc. Smoking is found to be other important cause. The melanocytes slowly lose its efficiency in melanin production and may stop functioning gradually. This decline is not even throughout, so the graying is not evenly distributed. The process begins with a depletion in melanin production, which turn black hair to gray then to white. Reactive oxygen species-mediated damage to mitochondrial and nuclear DNA with mutations with age and dysregulation of anti-oxidant mechanisms or pro/anti-apoptotic factors within the cells results in melanocytic aging.[3] Overproduction of copper-zinc superoxidase due to the above factors induces excessive H2O2 formation and triggers oxidative damage. Accumulated reactive oxygen species (ROS) creates significant oxidative stresses on both bulbar melanocytes and hair bulb epithelium (with keratinocytes).[4] Graying may be caused due to reduced tyrosinase activity in bulbar melanocyte. An abnormal interaction of melanosome transfer between these melanocytes and the cortical keratinocytes of hair bulbs also causes graying5.Anti-apoptotic factors like BCL-2 and melanogenic enzymes like TRP-1 and TRP-2 are important markers of graying.

Ayurveda

Ayurveda addresses canities as *Palithya*. *Bhrajaka pitha* is responsible for imparting natural colour to hair. Ayurveda classics mention it as *Sirogatavyadhi* (Caraka Samhita), *Sirokapalagata vyadhi* (Vagbhata) or *Khudraroga* (Sushruta Samhita). *Palithya* occur at the stage of *Vardhakya* (old age), but derangement of *Bhrajaka pitha* can cause early *Palithya* or *Akala palithya*. So, causes can be contributed to the factors which disorder *Pitha* in the body or which creates a stage of *Sama pitha* in the body, due to the *Nidanas* like *Katu, Amla, Theekshna, Patu ahara, Krodha* and *Vidahi ahara* and *Vihara.*

- Increase *Atapasevana* cause increase of *Ushna* in *Keshabhoomi* and *Romakoopa* causing *Akalapalithya*.
- Dietic factors like excessive use of *Amla, Lavana* and *Katu ahara* (present day, spicy food, processed food, over cooked meat (with carbon), pickles, maida, etc.), *Viruddha ahara* (food intoxicants) cause *Rasa dhatu dushti* and *Dhatwantara dushti*, causing *Asthi dhatu dushti* in turn causing *Kesha dushti* (being *Asthi dhatu mala- Asraya asrayi bhava)*
- *Manasika hetu* like *Krodha, Shoka, Adhika chinta* and *Manasika shrama* (increasing in competitive world with unemployment and relationship issues, and an impact of social media too aggravating the comparisons in concept of beauty) causes *Pitha* and *Vata prakopa* causing *Akala palithya.*
- Due to *Pitha prakrthi*, early chances of graying of hair noted (genetic factors and familial factors).
- Environmental factors like pollution, residence where they are staying prone to more heat, cause disequilibrium of *Pitha.*

Case Presentation

Hereby, report a case of patient of age 28 years, female, unmarried moderately built with BMI 21.8, with history of PCOD and migraine. She had presented with greying of hair over vertex region of head. She is of *Kaphapitha prakrthi* with dietary habits including fast food, spicy food, pickles, mixed diet. She has stress due to work and due to going to work by scooter, she is prone to sunlight exposure and had habit of helmet wearing.

Laboratory Findings

Haematological findings are found to be in normal limit.

Clinical Findings

Inspection and palpation

Affected part: Hair

- There was slight dandruff present.
- Hair was normal in texture and porosity.
- There was graying of hair over vertex of head.
- Slight hair fall noted on pulling hair.
- The rest of the hair was brownish black in colour.
- No signs of patches and folliculitis.

Personal history

Sleep was sound, appetite was good, bowel was normal, micturition was in normal frequency and she had dust allergy. All other systemic investigations including urinary, cardiovascular, respiratory, digestive and nervous systems were normal.

Treatment given

- Internal medication
- *Vicharana snehapana*
- *Virechana*
- *Siropichu*
- Patient was under strict diet (avoided all spicy, salt and non veg food, curd, pickles, Pappad)

Internal Medication (22/06/2024) for 2 weeks

1. *Guluchyathi kashayam*- 96ml, in empty stomach twice a day- 6am and 6pm- before food.
2. *Usheerasavam* -25ml, after food thrice a day.
3. Tablet *Chandraprabha*- 1 tablet along with *Kashayam* twice a day.

Internal medication (06/07/2024)- 1 week

Mahathiktakam ghrtam – 10g with hot water *Anupana* at night, before going to sleep.

***Virechanam* (14/07/2024)- 1 day**

Avipathy choornam- 20g – with hot water at 7am, empty stomach. Vegas -5

Rest for one day

***Siropichu* – 15 days (16/07/2024)**

Prapondarikadi tailam (evening for 45 minutes)

Rasayana (31/07/2024)

- Agasthya rasayana 1 tsp morning and at night, for 1 month
- External application of *Prapondarikadi taila* continued.

OBSERVATION

- Patient had the feeling of coolness all over the body.
- There was a lose of weight of 2 kg.
- Considerable new black hair growth was noted.
- Hair fall and dandruff got reduced.

Before

After

DISCUSSION

Guduchyathi kashayam possesses *Pittakapha samana* action and the ingredients are beneficial in diseases of *Annavahasrotas, Rasavahasrotas* and *Raktavahasrotas*. Studies proved anti-inflammatory, antipyretic, antiviral, antibacterial, anti-allergic, antioxidant and immunomodulatory effects for *Guduchi. Guduchi* has *Medovishoshana* (diminishes fat*), Rasayana* (rejuvenating) and *Raktha sudhikara* property. Most of the drugs increases digestive fire, by digesting *Ama* (balances the digestion pathway). *Rakthachandana* in this formulation has '*Varnya'* property. The *Kashaya* helped in turning down *Sama pitha* into *Nirama pitha* and *Rasa dhatu agnimandya* was corrected, reducing *Dhatwantara dusthi*.[6]

Usheerasava contains *Sheeta Virya* (cold) drugs like *Usheera, Chandana, Kumuda* and *Kamala* which pacifies vitiated *pitta* in the body and relieves *Pittaja* disorders. It is having the ingredients having actions like *Dipana* (appetizer), *Pachana* (digestive), *Pittahara*, *Dahahara, Kandughna* (anti-itching), *Rakta Shodhaka* (blood purifier), antistress, adaptogenic, anti-bacterial, bactericidal, anti-infective and *Rasayana* (rejuvenator) actions. Being *Pachana* it also helped in removing *Samatva* in *Pitha*. [7]

Chandraprabhavati is *Thridhoshasamka* drug with immunomodulatory, antioxidant, antistress and rejuvenating properties. The patient has history of PCOD and migraine. So, *Chandraprabha vati* has been given owing to her insulin imbalance since it acts on *Rasavaha, Rakthavaha, Mutravaha srotas* and is *Medohara, Pramehahara*. The patient's migraine or periods were not triggered during the entire treatment.

The combination of theses 3 medicines for one week, boosted up her appetite (*Pachana* of *Ama* and *Deepana* of *Agni*), she felt considerable coolness in her body and stress relieved (*Prakupitha pitha* got considerably reduced).[7,8]

Mahathikthakam ghrtam is widely used in skin diseases for *Snehapana* as it is *Vathapitha samana.* These drugs are having anti-infective, immuno-modulatory, *Rasayana, Ojovardhaka*, anti-stress, adaptogenic, *Medhya*, *Krimighna* etc., actions.

The *Agni* was prepared to accept the *Snehapana.* After *Snehapana*, she got considerable reduction in dryness of her body and skin got smooth.

Avipathi choorna has *Saraka* actions by virtue of the pharmacological properties of the ingredients with which the vitiated *Pitha* can get be expelled out. *Avipathi choorna* has drugs possessing anti-inflammatory, anti-oxidant and gastroprotective properties. She had 5 *Vegas*. She had 2 kilos of weight loss.[9]

Then she was ready for external application. *Prapoundarikadi taila* have drugs having *Sheeta Virya, Keshya* and *Pitta-Shamaka* property by which the effect of it on *Palitya* is considerable. Absorption of substances through the skin depends on the concentration, solubility of medication, duration of contact, physical condition of the skin and part of the body exposed. In *Shiropichu* oil is used since it has longer duration of contact with good dense concentration. Also, the skin over the scalp is thin as compared to other parts of the body and absorption is faster and more from the scalp. (As per the principle of drug absorption maximum absorption is in the scalp region.) Local effect is based on cellular absorption of drugs through transdermal route. *Shiropichu* reduces stress by improving the brain circulation. Since the medicine has *Keshya* and *Pithahara* properties, *Sthanika pitha dushti* was corrected. she felt satisfied relief in hair fall and there was black hair growth also.

'*Valipalithanashanam'* is one of the indications of *Agastya Rasayana*. All the drugs of *Agastya Rasayana* have immunity booster actions and has actions of rejuvenation. It is helping in opening up the channels (*Srotosodhana*). So, it nourishes the *Dhatus* and *Malas* are properly excreted. *Kesha* is the *Mala* of *Asthi dhatu*. *Agasthya rasayana* has *Tiktha dravyas* which is good for *Asthivahasrothas*. Since other therapies created a *Shoditha* and *Dosa* balanced *Deha*, *Agastya rasayana* could act at *Asthi dhatu* level and nourished the *Dhatu* and respective *Mala* is properly formed.

CONCLUSION

Guluchyathi kashayam, Usheerasavm and *Chandraprabha* caused balance of *Agni* in the body, they were *Pithasamaka* also. *Mahatikthaka ghrta snehapana* reduced dryness and brought *Snighdada* to the body. The accumulated imbalanced *Pitha* was eliminated from the body through the *Virechana* by *Avipathy choornam*. After *Shodana,* external application as *Siropichu* with *Prapoundarikadi taila* which was *Palithyahara, Pithahara* and *Keshya* was done. Later, as *Rasayana Agasthya rasayana* was given.

The new hair growth was of black, there was an increase in hair growth and satisfactory reduction in hair fall. There was stress relief and overall coolness of body.

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